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Mr. Larry Romine
U.S. Department of Energy
Richland Operations Office (A6-33)
P.O. Box 550
Richland, WA 99352-0550

Dear Mr. Romine:

Subject: **Comments on EE/CA for 224-B Facility**

I support the choice of recommended Alternative Three in *Engineering Evaluation/Cost Analysis for the 224-B Plutonium Concentration Facility*, DOE/RL-2000-06, Rev. 2, December 2003.

I agree with the third paragraph of Section 4.3 that piping and drains entering or exiting the 224-B Facility below grade and the pipe tunnel area in Cell C that would need to be plugged, backfilled, and/or grouted as appropriate, and the slab would need to be stabilized. However, as I remember, there were one or more unplanned radioactive releases to the soil immediately adjacent to the building that might need further stabilization also. Any further work should be coordinated with and be fully compatible with the Canyon Disposition Initiative for the nearby B Plant Complex.

Criticality Safety Considerations

For criticality safety, two Bechtel Hanford field verification requirements (FVRs) were imposed before turnover of the 224-B Facility to Fluor Hanford, and I would expect FH to have an appropriate criticality safety program at the 224-B Facility during their D&D work. The FVRs are paraphrased as: 1) "Non-Intrusive" characterization (including surface smear samples, scoop samples, and radiological surveys) and NDA are permitted without additional criticality evaluation. 2) Fissionable material inventory verification in the 224-B Facility is required if "Intrusive" activities are planned. Intrusive activities have the potential to change the form and distribution of the plutonium, add moderation such as water, or increase neutron reflection. Precaution: Should shielding or other neutron reflectors (other than necessary NDA equipment, personnel, and pre-existing structures) be required within 10 centimeters of unverified surfaces or tanks expected to contain plutonium, then a criticality evaluation is required. This precaution applies particularly for Tank D-3 in D Cell and Tanks F-8 and F-9 in F Cell, which are estimated to contain ~80% of the Pu-239 and Am-241 in the entire 224-B Facility.

General Comments on the EE/CA

In Table 2-1, I believe the correct entry for B Cell in column 3 should be 1.16 Ci Pu-239. This is also consistent with the larger gram quantity of Pu-239 in column 4 and with the total at the bottom of column 3.

Floor plans and elevation views to support Section 2.2 would have been very helpful. The word description is insufficient for anyone not already familiar with the actual blueprints.

Sincerely,

Les Davenport

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